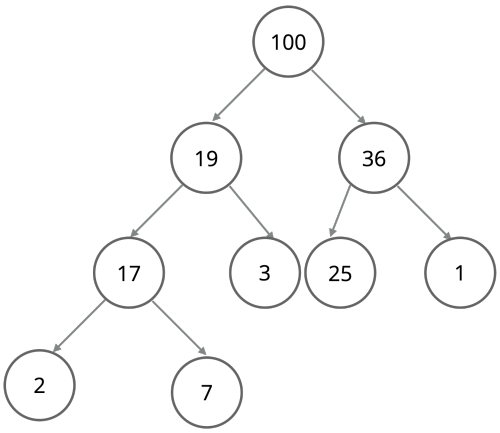
CS62: Fall 2025 | Lecture #14 (Priority Queues & Heapsort) worksheet | Jingyi Li

1. Delete and return the maximum of this binary heap.



2. Write the method `public E deleteMax()`. (Hint: it's only 4 lines of code. You can use sink(k)/swim(k).)

3. Given an empty binary heap that represents a priority queue, perform the following operations. Ideally draw the binary tree at each step.

- Insert P (16)
- Insert Q (17)
- Insert E (5)
- Delete Max
- Insert X (24)
- Insert A (1)
- Insert M (13)
- Delete Max
- Insert P (16)
- Insert L (12)
- Insert E (5)
- Delete Max

4. Run the first step of heapsort, heap construction, on the array [2,9,7,6,5,8].

5. Given the heap you constructed before, run the second step of heapsort, sortdown, to sort the array [2,9,7,6,5,8].